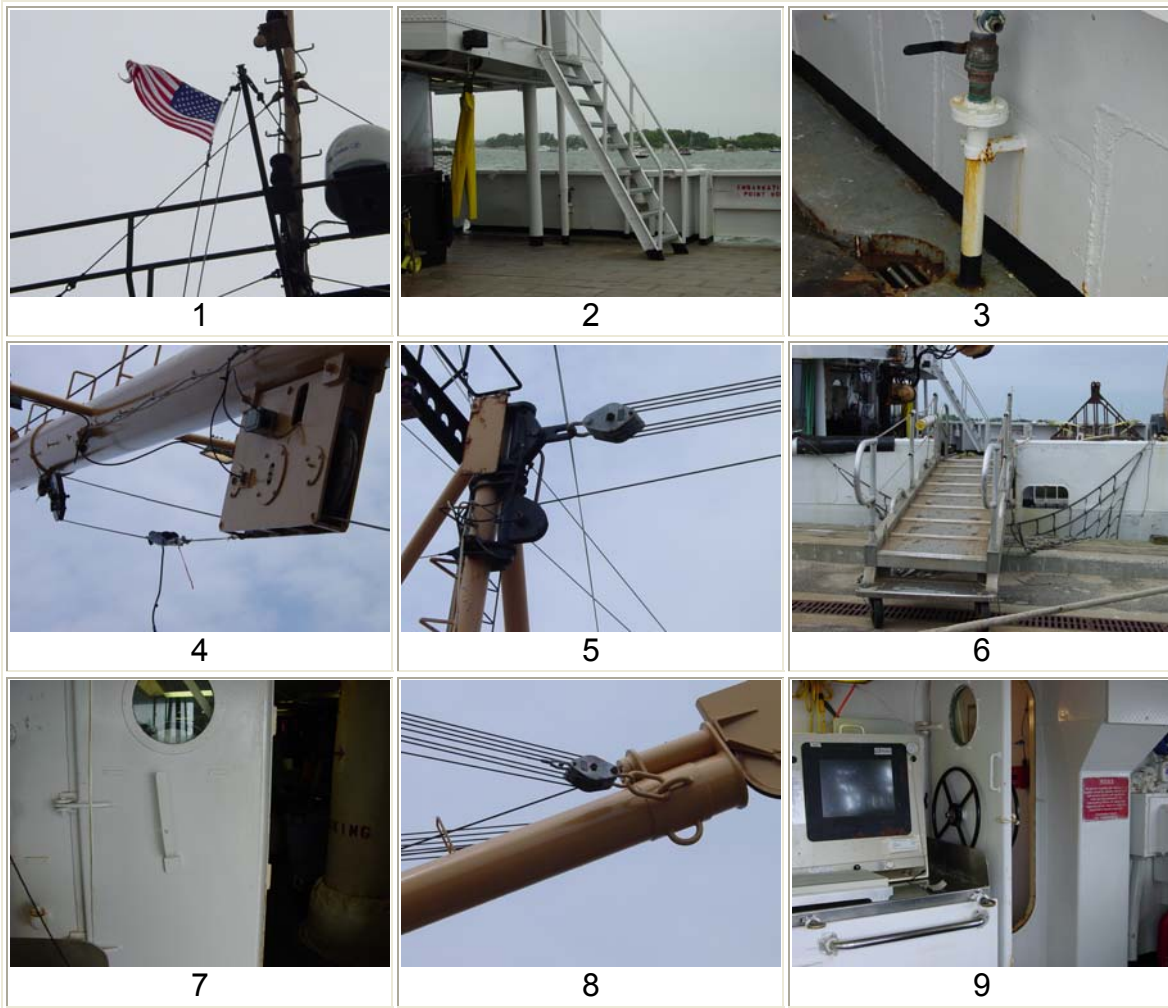


Day 2



Date: July 26, 2005

Time: 03:36 GMT 11:36 p.m. EDT

Latitude: 40.31 N

Longitude: 69.05 W

Visibility: unknown

Wind direction: S (193 degrees)

Wind speed: 19.6 knots

Sea wave height: 1'

Swell wave height: 1'

Sea water temperature: 17.7°C

Sea level pressure: 1013.0 millibars

Cloud cover: 00 Clear

Question of the Day:

Identify and classify the simple machines that make up machines found around the ship. Match the pictures above with the six simple machines- inclined plane, wedge, wheel and axle, screw, wedge, and pulley. Choose one of the machines shown in the pictures, and explain how it makes work easier to do. (Send your answer to one of the e-mails listed below.)

Yesterday's Answer:

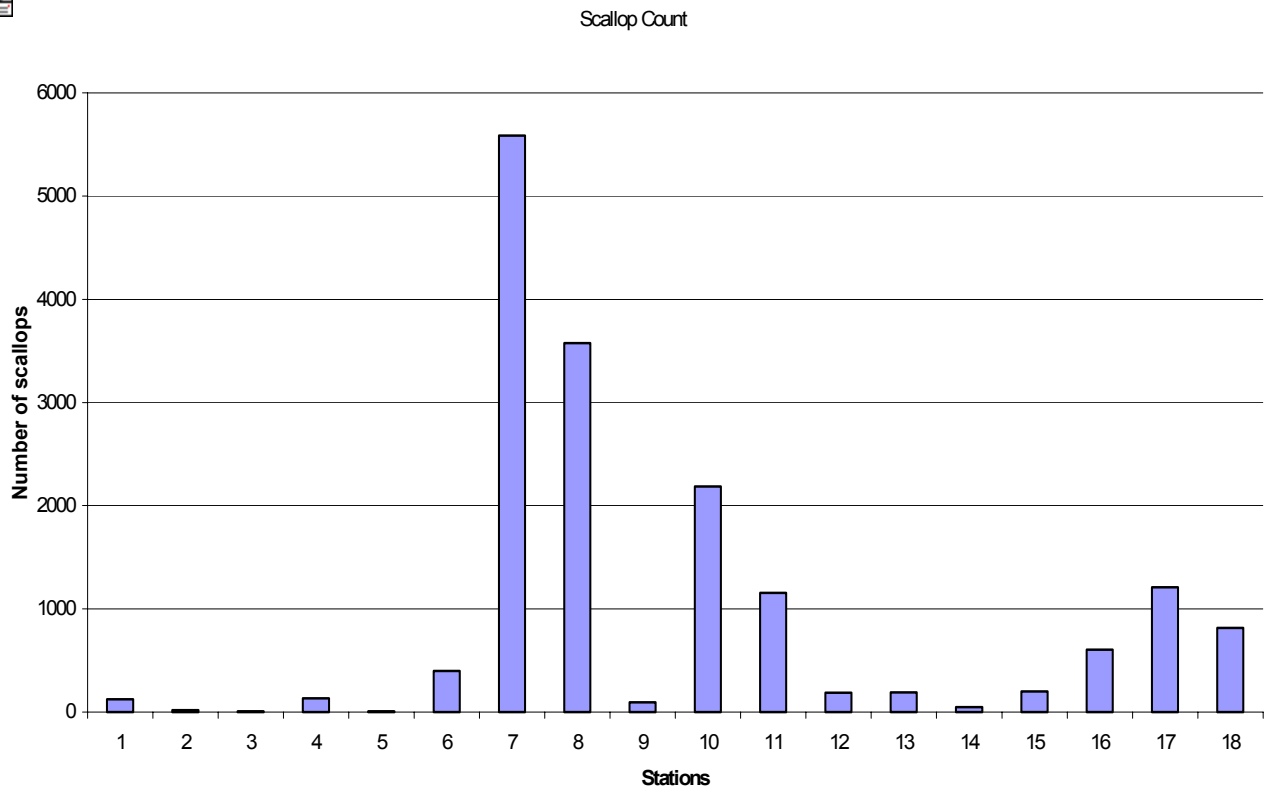
The weather instruments located on the Albatross IV that measure wind speed and direction are the anemometer and wind vane. They are combined into one instrument, and it looks like an airplane without wings.

Science and Technology Log:

Machines serve an important job on the Albatross IV and any other ship. The six simple machines in of themselves can make work easier to do. For example, a round doorknob handle on a ship's door is not as common as a lever handle. On a ship, you are often unable to turn a doorknob because your hands may be wet or you may be carrying something. Also, door levers make it easier to tighten hatches securely. Some of these simple machines are combined to make compound machines. On the ship, you will find many examples of both simple and compound machines, all of which make work easier and safer to do.

One way in which machines make the scallop survey easier and safer is the use of a crane with many pulleys. The eight-foot wide dredge is lowered as the ship slows to 3.8 knots. When the dredge reaches the bottom, it is towed for 15 minutes. This allows the dredge to drag and fill the netted and chained device. This device resembles a large purse overfilled with goodies when full. Then the catch or load is dropped and released onto the deck. The large pulley system on one of the cranes allows for a cable that can handle a large weight. Likewise, the boom of the crane supports the weight of the towing dredge. One improvement that would help this compound machine would be to create some kind of conveyor system to bring the load back toward the sampling and measuring area without having to drag loaded baskets and buckets. Coincidentally, this is part of the design of the new ship that will replace the Albatross IV, and as a result make work even easier.

Here is a graph showing the total number of scallops brought in at each of the stations so far. Some areas in which the tow was made are closed to scallop harvesting. As a result, larger and more developed scallops were caught. In tomorrow's log, you will learn a little more about scallop adaptations that have helped them survive despite negative human influences.



*Numbers 1 – 18 corresponds to stations 0227 – 0244.

Personal Log:

Sea Duty

The waves come toward the Albatross and into the lengthy side,
Feel the rocking back and forth, so hold on for the bumpy ride.
Prepare the dredge and send it forth to bring up another load,
Bring out the baskets and buckets and pads to get in a sorting mode.
Place the containers on the scale then measure the scallop's shell,
Soon the shift will come to an end with only stories left to tell.

E-mail: scientist12.albatross@noaa.gov (during cruise)
sammojch@cps.k12.va.us (after cruise)